

frame member forming a closed loop structure about a substantially open aperture further having a receiving bonding surface upon which a first thin film may be received and bonded whereby said first thin film is affixed to said first frame and extends over the open aperture to form a [taught] taut, substantially flat surface.

5 2) (Amended) A barrier and Mid-IR optical window of claim 1,
said first frame further comprises a mechanical coupling means whereby said
frame may be coupled to an optics head enclosure housing, and
said thin film is a polymer type material comprising molecules in a stressed state
10 whereby polymer molecules are subject to a relaxing force which tends to pull the film
[taught] taut in a shrinking action.

 8) (Amended) A barrier and Mid-IR optical window of claim 1, said
window is comprised of two frames and two thin film members separated spatially [be]
15 by a body member.

 14) (Amended) Methods of forming optical windows including:
 providing a thin film polymer material highly uniform in thickness, said
polymer being comprised of molecules held in a stretched or linearized state;
20 forming a closed loop frame of rigid material to provide a large area open
aperture;
 affixing said polymer material to said frame;
 applying heat to said thin film polymer to encourage polymer molecules to
return towards a relaxed state thereby pulling the material [taught] taut across said
25 large area open aperture; and
 removing heat and allowing said polymer material to set or freeze in a
[taught] taut state thereby providing a highly uniform flat surface.

Please cancel claim 21.

COMMENTS

Applicants are having difficulty understanding Examiner's objection set forth in paragraph 1. Specifically, Examiner objects to the drawings as having included therein reference numerals 128 and 129. However, Applicant's file does not reflect such
5 numerals and it is not clear as to which the Examiner refers. Thus redirection in this matter is respectfully solicited. Perhaps Examiner could indicate in which Figure those numerals are found.

In accordance with Examiner's comments set forth in paragraph 2, Amendment to the specification is proposed above. Should further changes be necessary, Applicants will
10 appreciate attention being drawn to those.

REJECTIONS UNDER 35 U.S.C. §112

In view of Examiner's rejections under 112, claim 21 has been cancelled.

15 REJECTIONS UNDER §102

1) Examiner Fails to Make a Prima Facie Case of Anticipation

Examiner fails to produce a prima facie case of anticipation, therefore, Applicants are entitled a patent. This view is endorsed by the Federal Circuit¹. In the present case, Examiner has not produced a proper showing of anticipation as required. Thus,
20 Applicants now request review and solicit early Notice of Allowance.

A. Cited Reference Fails to Teach or Disclose Claimed Invention

The description must enable a person with ordinary skill in the art not only to comprehend the invention but also to make it².

I. Cited Reference is not Enabling

25 The C.C.P.A. stated that a prior art reference

"may yet be held not to legally anticipate the claimed subject matter if it is found not to be sufficiently enabling, in other words, if

¹ *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q. 2d 1443 (Fed. Cir. 1992)

² *Paperless Accounting, Inc. v. Bay Area Rapid Transit Sys.*, 804 F.2d 659, 665, 231 U.S.P.Q. 649, 653 (Fed. Cir. 1986), cert denied, 480 U.S. 933 (1987); *In re Moreton*, 288 F.2d 708, 711, 129 U.S.P.Q. 227, 230 (C.C.P.A. 1961)

it does not place the subject matter on the claims within the possession of the public"³.

5 In the present case, Braig et al teaching fails to enable those skilled to effect the invention. Important detail has been omitted from the specification and other non-relevant or unimportant detail occupies considerable portions of the specification. One who follows the specification closely will not be able to realize or bring about the claimed devices and methods. For example, there is no mention of the process
10 required to properly affix the thin film to its frame to avoid wrinkling. Braig et al do not fully instruct one as to the proper techniques which assure mounting can be made without leaving the window in a condition which will not interfere with optical transmission. Braig further fails to point out the essential element that the window must be exceptionally thin
15 to prevent excess absorption in the middle IR wavelengths. In Braig, thick windows laminated with antifog materials are acceptable. Thus, Braig actually teaches away from the inventions described by Applicants.

20 II. Cited Reference Amounts to a Failed Experiments

Failed experiments or inoperative inventions are not to be considered prior art. As stated by the Supreme Court:

"An inoperable invention or one which fails to achieve its intended result does not negative novelty"⁴

25 Or as noted by the Federal Circuit:

"The 'failed' experiment reported in the prosecution history of the Mason patent renders that patent irrelevant as a prior art reference".⁵

30 Or further by Judge Learned Hand:

³ In re Wilder, 429 F.2d 447, 166 U.S.P.Q. at 548 (citing In re LeGrice, 301 F.2d 929, 133 U.S.P.Q. 365(C.C.P.A. 1962); In re Brown, 329 F.2d 1006, 141 U.S.P.Q. 245 (C.C.P.A. 1964)

⁴ United States v. Adams, 383 U.S. 39, 50, 148 U.S.P.Q. 479, 483 (1966) (citing Smith v. Snow, 294 U.S. 1, 17 (1935)).

"Another's experiment, imperfect and never perfected will not serve either as an anticipation or as part of the prior art, for it has not served to enrich it."⁶

5 Braig et al disclosure amounts to no more than failed experiments. The concepts presented appear, on paper, to tell a complete story. However, when attempts to follow the teaching in a practical setting result in inoperative and unworkable systems. For example, with Braig et al suggested frame which is not circular in cross section, the forces about the window edges cannot be uniform and leave wrinkles in the window; or at least will cause variances to the thinness of the window. Only a circular frame assures constant forces about the film. Accordingly, while Braig can draw his diagrams and descriptions to perfection, these instructions merely result in that which cannot be brought forth in a practical form.

15 **B. Each and Every Element Must be Disclosed**

Examiner's attention will please be directed to MPEP §2131 which states: **"TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EACH AND EVERY ELEMENT OF THE CLAIM".**

20 Case law supports a detailed and concurrent position: Anticipation is established **only** when a single unit of prior art discloses, expressly or under principles of inherency, **each and every** element of the claimed invention.⁷ This test is to be strictly applied.⁸ Moreover, such single unit of prior art must disclose the elements **arranged in the same manner** to obtain a similar result as required

⁵ Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 225 U.S.P.Q. 26, 33 (Fed. Cir. 1985)

⁶ Picard v. United Aircraft Corp., 128 F.2d 632, 635, 53 U.S.P.Q. 563, 566 (2d Cir. 1942), cert. denied, 317 U.S. 651 (1942)

⁷ RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 U.S.P.Q. 385, 388 (C.A.F.C. 1984); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 U.S.P.Q. 781, 789 (C.A.F.C. 1983).

⁸ Studiengesellschaft Kohle mbH v. Dart Indus., 549 F. Supp. 716, 723, 216 U.S.P.Q. 381,384 (D. Del. 1982).

by the claims.⁹ Thus it is not enough that a reference disclose all the claimed elements in isolation.

In the case at bar, the fundamental element cannot be found, that is, a 'mid-IR optical window' as set forth in claim 1. Examiner asserts that Applicants' limitation claimed 'frame member' is met by Braig et al element (50). Braig writes explicitly that element 50 is an airway adapter body. This is a tubular element of complex three dimensional shape which cannot serve as a frame member. Further, the arrangement claimed by Applicants in claim 1, includes 'thin film is affixed to said first frame'; corresponding arrangement is not similarly shown to be found in Braig.

In Claim 2, Applicants further disclose the elements: "a mechanical coupling means". This mechanical coupling means provides that the 'frame can be coupled to an optics head' No such structure is presented in Braig and Examiner has not presented a finding of equivalent structure in Braig.

Other elements explicitly claimed by Applicants are not found in Examiner's presentation. The prima facie case depends on a finding of each and every element, and the arrangements between elements as described by Applicants claims. This is most clearly illustrated in Claim 10 where Applicants claim a 'desiccant reservoir' which is not mentioned in Examiner's anticipation analysis of the claims. Other elements and relationships are similarly omitted throughout.

Applicants take exception that claims 14, and 16-18 have been dismissed without analysis as being inherent without a showing of such. Examiners assertion of inherency must be backed with objective proof of inherency to provide Applicants opportunity to defend their position with specificity.

C. Cited Elements are More than those Which Would be Interpreted by One of Ordinary Skill

⁹ Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 U.S.P.Q. 481, 485 (C.A.F.C. 1984); *In re Marshall*, 578 F.2d 301, 304, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978).

Examiner's interpretation of the prior art is flawed as it is not one of ordinary skill in the art. In view of Applicants' teaching, Examiner may have read into Braig et al to find things which are more than that which would be found by a person of ordinary skill. For example, the airway adapter is equated with the 'frame' claimed by Applicants. It is unlikely that one skilled in the arts would find such airway adapter to meet the limitations set forth in Applicants' claims.

2) Special Section re: §102 rejections to claims without §103 rejections

That claims 1-3, 5, 7-10,14,16-18 and 21 have been rejected under 35 USC §102, does not automatically convey upon those claims a rejection under 35 USC §103. The test for anticipation is quite distinct from obviousness. If rejections under 35 USC §102 are withdrawn, then the claims are necessarily in condition for allowance because no rejections will remain against them. Furthermore, all dependent claims which depend from those claims in condition for allowance, as they are necessarily non-obvious in that they depend from a non-obvious claim, must also be in condition for allowance without regard for any obviousness type rejections directed to the independent part of those dependent claims; if a base claim is not obvious, then any claim which presents further limitation is also not obvious.

Examiner has failed to include obviousness type rejections and appropriate analysis to support such rejections to base claims. 'Obviousness' and 'Anticipation' are distinct concepts and the courts have been clear on this matter¹⁰. Thus all rejections to dependent claims under 35 USC §103 will be moot should tests for anticipation under 35 USC §102 fail and base claims from which they depend become allowable.

In interest of reducing pending time, Applicants respond to rejections under §103 which may be otherwise ignored if rejections under 35 USC §102 are withdrawn.

¹⁰ Jones v. Hardy, 727 F.2d 1524, 1529 220 U.S.P.Q. 1021, 1025 (C.A.F.C. 1984).

REJECTIONS UNDER §103

1) Examiner fails to make a prima facie case of obviousness

Examiner has not demonstrated all elements of the prima facie case, and therefore Examiner's opinion of obviousness is deficient and Applicants are deserving of a patent. The Federal Circuit endorses this view in writing:

"if the examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent."¹¹

To successfully establish a prima facie case of obviousness, Examiner must provide: one or more references, that were available to the inventors, and that teach, that include a suggestion to combine or modify the references, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of ordinary skill in the art. Examiner has failed to establish one or more of these elements which necessarily renders Examiner's prima facie case of obviousness defective. These points are addressed herefollowing with specificity.

A) References Must be Available to the Inventor

I) Cited References are Not Reasonably Pertinent

The Federal Circuit has provided a blueprint to clarify how to determine whether a reference is reasonably pertinent to the particular problem with which the inventor was involved. The Federal Circuit has stated that:

"[a] reference is reasonably pertinent if ...it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem... If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem... [I]f it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it."¹²

¹¹ *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q. 2d 1443 (Fed. Cir. 1992)

¹² *In re Clay*, 966 F.2d 656, 23 U.S.P.Q. 2d 1058, 1060-61 (Fed. Cir. 1994)

In consideration of the question as to whether a reference is reasonably pertinent to the particular problem, it is instructive to consider *Wang Laboratories, Inc. v. Toshiba Corp.*,¹³ where Wang sued Toshiba and Toshiba argued invalidity in view of patent assigned to Allen-Bradley. The Federal Circuit held the Wang patent valid despite the Allen-Bradley patent because the Allen-Bradley patent was in a non-analogous art. It was held that the patent was not in the field of endeavor:

"The Allen-Bradley art is not in the same field of endeavor as the claimed subject matter merely because it relates to memories. It involves memory circuits in which modules of varying sizes may be added or replaced; in contrast, the subject patents teach compact modular memories."

The Federal Circuit stated that even though the Allen-Bradley patent was not within the same field of endeavor as the Wang patent, it might still be considered analogous art if the Allen-Bradley patent were reasonably pertinent to the problem the inventor attempted to solve. In this respect, the court held the following:

"Wang's SIMMs were designed to provide compact computer memory with minimum size, low cost, easy repairability, and easy expandability... In contrast, the Allen-Bradley patent relates to a memory circuit for a larger more costly industrial controller... Thus, there is substantial evidence in the record to support a finding that the Allen-Bradley prior art is not reasonably pertinent and is not analogous"

Similarly, in the present case, Braig et al teaches an airway adapter body which is not an optics head or optical element or optical system. It is a pathway for air. For this reason, the field of this invention is far removed from that which Applicants' invention properly belongs and is explicitly stated as being, in part, "barriers for optical heads in gaseous atmospheres".

B) Suggestion to Combine or Modify the Reference

¹³ Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 26 U.S.P.Q. 2d 1767 (Fed. Cir. 1993).

I) References Must Contain Suggestion to Combine or Modify

There must be some logical reason apparent from positive concrete evidence of record that justifies a combination of primary and secondary references¹⁴. It is insufficient to show merely that each separate element of a claimed combination can be found in one or various prior art references¹⁵. The mere fact that it is possible to find two isolated disclosures which might be combined in such a way to produce a new compound does not necessarily render such production obvious unless the art also contains something to suggest the desirability of the proposed combination¹⁶. Although the ability to combine elements may be within the skill of the art, absent a suggestion in the prior art of the desirability of doing so does not make the combination obvious¹⁷. Combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination cannot establish obviousness¹⁸.

Claims 4, 6, and 19 have been rejected in view of Braig et al alone. Thus, the elements found in Applicants' invention but missing in Braig et al, must be **suggested as modifications** in Braig et al. Examiner fails to point to any such suggestion to modify in Braig et al. Applicants seek redirection on this point and look for clarity with regard to where in Braig et al one might find the required suggestion to modify in order that a more complete defense can be formulated. Specifically, Claim 6 presents that a window might be secured to an optics head via a threaded member. There is no such suggestion found in Braig. All other combinations under the obviousness consideration must be suggested in the art cited.

¹⁴ *In re Regel*, 526 F.2d 1399, 1403, 188 U.S.P.Q. 136, 139 (C.C.P.A. 1975); *In re Sterniski*, 444 F.2d 581, 586-587, 170 U.S.P.Q. 343, 348 (C.C.P.A. 1971).

¹⁵ *Canadian Ingersoll-Rand Co. v. Peterson Prod., Inc.*, 223 F.Supp. 803, 139 U.S.P.Q. 61 (N.D. Cal 1963)

¹⁶ *In re Gergen*, 11 U.S.P.Q. 2d 1652, 1653 (C.A.F.C. 1989); *In re Grabiak*, 769 F.2d 729, 732, 226 U.S.P.Q. 870 872 (C.A.F.C. 1985).

¹⁷ *In re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (C.A.F.C. 1986).

¹⁸ *Smithkline Diagnostics, Inc., v. Helena Labs. Corp.*, 859 F.2d 878, 886, 8 U.S.P.Q. 2d 1468, 1475 (C.A.F.C. 1988); *In re Geiger*, 2 U.S.P.Q. 1276, 1278 (C.A.F.C. 1987).

C) **Combination or Modification Must *Appear* to be Obvious.**

Applicants reject suggestions that all necessary prima facie elements are made, i.e. that references: are available; teach; or contain suggestions to be combined. However, the following presentation argues against any of Applicants' claims as being obvious. Although presentation of such argument may appear to endorse the position that cited references are valid, Applicants explicitly reject such conclusion and hereby state the contrary to be the case.

A common standard of obviousness is set forth in **Graham v. John Deere Co**¹⁹. It is a three part test where: 1) the scope and content of the prior art is to be determined; 2) the differences between prior art and Applicants' claims are to be ascertained; and 3) the level of ordinary skill is to be resolved. Against this background, obviousness or nonobviousness of the subject matter is to be determined.

That test has not been properly applied by Examiner. Applicants are faced with Examiner's mere assertion "*it would be obvious*". Examiner's Office Action lacks full analysis of: scope and content of the art; difference or differences; or level of ordinary skill. Applicants solicit reconsideration and redirection with respect to these rejections having been made without proper basis. Applicants further request detailed explanation so that an appropriate response and defense can be formulated.

That an applicant is entitled a patent is established by the introductory language of 35 U.S.C. §102²⁰. While 35 U.S.C. §103 imposes further condition for patentability beyond novelty, such does not have the effect of placing the burden of proving the irrelevancy of prior art upon Applicants²¹. Rather, it is to the Examiner to provide at least an appearance of obviousness; failing that, the rejection must be withdrawn.

¹⁹ 383 U.S. 1, 15, 148 U.S.P.Q. 459, 466 (1966)

²⁰ 35 U.S.C. 102: 'A person shall be *entitled* to a patent unless-. [emphasis added].

²¹ Color Communications, Inc. v. La Clede Mfg. Co., 7 U.S.P.Q. 1164, 1166-67 (W.D.N.Y. 1987).

Applicants now present facts in support of a finding of non-obviousness for Examiner to consider in further review; all the evidence must now be considered anew²².

2) **Rebuttal to Examiner's Case of Obviousness**

Although Applicants wholly reject any notion that a prima facie case is made, if after appropriate and full review by Examiner or a Board of Appeals that position is affirmed, then Applicants provide following argument in rebuttal to such prima facie case.

A) **Technical differences**

Technical differences between Applicants claimed invention and cited art, including combinations thereof, were not considered by Examiner remain without address. It is not sufficient for Examiner to examine a few, or selected, or primary, differences in view of tests for obviousness, but rather, Examiner must examine *all* differences. The following technical differences were not addressed in Examiner's Office Action. Reconsideration is requested.

Claim 4, which depends upon Claim 2 and incorporates all limitation thereof, includes the element "mechanical coupling means". This element and its relationships with other associated elements has not been addressed in the obviousness analysis. This difference was not considered in view of ordinary skilled practitioners. Further, Claim 4 includes a 'plastic weld heat bond' between a thin film and a frame. Braig et al only suggest a plastic weld between a thick and rigid frame and a body which is a relationship not included in any of Applicants arrangements. Further Braig et al does not suggest that such arrangements between a thin film and the frame member be made. Thus, this relationship has not been properly analyzed in view of the three part obviousness test.

As to claim 19, Examiner merely dismissed the obviousness test and replaces it with a statement 'it is inherent'. However, inherency is part of an

²² *In re Eli Lilly & Co.*, 902 F.2d 943, 14 U.S.P.Q.2d 1741, 1743 (C.A.F.C. 1990); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (C.A.F.C. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 U.S.P.Q. 143, 147 (C.C.P.A. 1976)

anticipation analysis but not part of the obviousness test. One cannot prove obviousness via inherency and Applicants know of no statute which might suggest that. Examiner is requested to point to the statutory basis for inherency as it relates obviousness considerations.

5 Claim 10 and 12 are rejected as unpatentable over Braig et al in view of Fujisawa. The desiccant reservoir and the dehumidifier have a relationship, spatial proximity, which is not considered in any analysis of cited art. There is no assertion from Examiner that Fujisawa suggests combining a window such as that taught by Braig et al, or other. Each and every element and their relationships must be considered. Examiners does not present a complete obviousness test to these rejected claims. Accordingly, it is impossible for Applicants to now come forth with a defense. Similar omissions of the full obviousness test follow in claims rejections to Claims 13, 15, and 20. Applicants ask for redirection as to these rejections.

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3) **Examiner Uses Personal Knowledge**

It appears, at least in part, that Examiner uses personal knowledge or judicial notice to support rejections relating to obviousness. Accordingly, Applicants hereby request an affidavit under 37 CFR §1.107(b) with respect to any and each rejection based upon Examiner's personal knowledge or judicial notice.

20 Applicants pray this answer traverse each and every rejection set forth in the above-identified examination placing the claims in condition for immediate allowance. In accordance, Applicants now supplicate re-examination and a favorable conclusion on the earliest possible occasion should it please his Honorable Commissioner.

25 Very respectfully submitted,



Joseph Page

reg. # 35,311